

LOADING PLATFORM SYSTEM WITH SLIDE UNIT

PATENT CLAIMS

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1. Loading platform system (10) for mounting on vehicles (11), particularly trucks, comprising a lift support arrangement (12) consisting of two essentially parallel spaced support structures (13, 14), an essentially plate-like loading platform (15) for lifting and lowering a load, at least one lift actuating device (16) for lifting and lowering the loading platform (15) as well as a slide unit (18), which is back and forth movable in the longitudinal direction (112) of the vehicle and which can be mounted on the vehicle (11) and to which at least the lift support arrangement (12), the loading platform (15) and at least the lift actuator device (16) are attached, characterized in that the slide unit (18) is mountable on the support frame (110, 111) of the vehicle (11).

2. Loading platform system according to claim 1, characterized in that the slide unit (18) is mounted to the support frame (111, 112) by way of at least one transverse member (19, 20) which bridges the distance between two spaced frame members forming essentially the vehicle support frame (110, 111).

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3. Loading platform system according to claim 2, characterized in that the transverse member (19, 20) is provided at its opposite ends (21, 22) with front elements (23, 24) which are connected to the transverse member (19, 20) and by way of which the transverse member (19, 20) is mounted on the support arm forming the support frame (110, 111).

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4. Loading platform system according to one or both of the claims 1 or 2, characterized in that the slide unit (18) is re-

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movably connectable by way of tab-like clamping elements (25), which extend over horizontal webs of the frame members forming the support frame (110, 111).

5. Loading platform system according to one or several of the claims 2 to 4, characterized in that, the transverse member (19, 20) is longitudinally movable.

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6. Loading platform system according to one or several of the claims 2 to 5, characterized in that the transverse member (19, 20) is so mounted on the slide unit (18) that it is movable essentially in the longitudinal direction with respect to the support frame 110, 111 of the vehicle when a force is effective thereon which exceeds a predetermined amount.

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7. Loading platform system according to claim 6, characterized in that the slide unit (18) includes, at the side (26) thereof directed toward the transverse member (18, 19), at least two opposite spaced legs (27, 28) in which elongated holes (29) for mounting the transverse member (19, 20) are formed.

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8. Loading platform system according to one or more of claims 1 to 7, characterized in that the slide unit (18) comprises at least two essentially parallel spaced guide elements (30, 31) which are stationary relative to the vehicle (11) and at least two essentially parallel spaced slide elements (32, 33) which are support members that are movable longitudinally relative to the vehicle (11) and back and forth movably supported by the guide elements (30, 31).

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9. Loading platform system according to claim 8, characterized in that the guide elements (30, 31) have an essentially C-shaped cross-section.

11. Loading platform system according to one or both of claims 8 or 9, characterized in that the slide elements (32, 33) are guided in the guide elements (30, 31) by roller elements (320, 321, 330, 331) mounted on the slide elements (32, 33).

12. Loading platform system according to one or several of claims 8 to 11, characterized in that the slide unit (18) includes stops (45, 46) which are effective in the longitudinal vehicle direction (112) at least in the direction of outward movement of the slide elements (32, 33) and which limit the outward movement thereof.

13. Loading platform system according to claim 12, characterized in that the stops (45, 46) include holes (450, 460) which are oriented in the longitudinal direction (112) of the vehicle and into which support pins (322, 332) extend which are disposed on the slide elements (32, 33).

14. Loading platform system according to claim 13, characterized in that the holes (450, 460) and the support pins (322, 332) are conical in their longitudinal cross-section.

15. Loading platform system according to one or several of the claims 12-14, characterized in that the stops (45, 46) are adjustable in the longitudinal direction (112) of the vehicle.

16. Loading platform system according to one or several of claims 8 to 15, characterized in that the slide unit (18) includes end stops (47, 48) which are effective in the longitudinal

nal direction (112) of the vehicle at least in the direction of slide-in movement (114) of the slide elements (32, 33) and which limit the slide-in movement.

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17. Loading platform system according to claim 16, characterized in that the end stops (47, 48) are so designed that they are non-elastically deformed when subjected by the slide elements (32, 33) to a force above a predetermined threshold in the longitudinal vehicle direction (112).

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18. Loading platform system according to one or more of claims 1 to 17, characterized in that the slide elements (18) are back and forth movable by a slide actuator (34).

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19. Loading platform system according to claim 18, characterized in that the slide actuator (34) consists of at least a pneumatically and/or hydraulically operated piston cylinder system.

20. Loading platform system according to one or several of claims 1 to 19, characterized in that a transverse beam (35) is provided by which the support structures (13, 14) are interconnected.

21. Loading platform system according to claim 20, characterized in that the transverse beam (35) is arranged at the end of the support structure remote from the slide unit (18).

22. Loading platform system according to claim 21, characterized in that the transverse beam (35) is in the form of a back-ending protection element.

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23. Loading platform system according to according to one or several of the claims 1 to 22, characterized in that the

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Concl* transverse beam (35) is essentially rectangular in cross-section.

24. Loading platform system according to one or several of claims 20 to 23, characterized in that the transverse beam (35) is provided at each end (36, 37) with a flange web (38, 39) by way of which it is mounted to one of the support structures (13, 14).

SUMMARY

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A loading platform system (10) for mounting on vehicles (11), particularly trucks, is proposed comprising at least one lift support arrangement (12) consisting of two essentially parallel spaced support structures (13, 14), an essentially plate-like loading platform (15) for lifting and lowering a load, at least one lift actuator (16) for lifting and lowering the loading platform (15) and a slide unit (18), which is movable back and forth in the longitudinal direction (112) of the vehicle and mountable on the vehicle (11) and on which the at least the lift support arrangement (12), the loading platform (15) and at least the lift actuator (16) are mounted. The slide unit (18) is adapted to be mounted on the support frame (110, 111) of the vehicle (11).

The translation was prepared by the undersigned. It is assured that the above translation is a correct translation of the German text supplied with the application.

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